

A HIGH QUALITY FACTOR SPIRAL INDUCTOR THAT UTILIZES
ACTIVE NEGATIVE CAPACITANCE

ABSTRACT

[0048] The present invention is an apparatus and system for providing a high quality spiral inductor in an integrated circuit environment. A layer of inductor may be placed within the metal layers along with negative capacitance generation circuitry of the present invention to compensate for the capacitance associated with the metal layers adjacent to the inductor to provide a higher quality factor for the inductor. Advantageously, circuitry of the present invention may be employed within an integrated circuit without modifying the layer structure of the integrated circuit. Additionally, values of the components of the circuitry may be selectively and independently chosen to synthesize a variable range of negative capacitance.